

A REVIEW OF THE GENUS *SQUAMOSA* BETHUNE-BAKER IN CHINA (LEPIDOPTERA, LIMACODIDAE)

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Abstract Two species and one subspecies of the genus *Squamosa* Bethune-Baker are recognized from China, including a new species, *S. brevisunna*, and a new subspecies, *S. brevisunna yunnanensis*, described herein. *Squamosa dhalates* Orhant is reported for the first time in China. *Squamosa ocellata* (Moore) is not found in China yet. The photographs and the genital illustration of the examined species and subspecies are given. A key to the Chinese species and subspecies of the genus is provided.

Key words Lepidoptera, Limacodidae, *Squamosa*, new species, China.

The genus *Squamosa* was erected by Bethune-Baker in 1904, based on the type species, *Squamosa ferruginea* Bethune-Baker. Hering (1931) transferred the second species, *Nonema ocellata* Moore, to the genus. Orhant (2000) described the third species, *S. dhalates*, from Myanmar and Thailand. In China, one species of *Squamosa* has been known as *S. ocellata* (Moore) from Yunnan (Cai, 1981). In this paper, two species and one subspecies are reported from China, of which one species is newly recorded in China and one species and one subspecies are described as new to science. *Squamosa ocellata* (Moore) is not found in China.

The type specimens of the new species and subspecies are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Genus *Squamosa* Bethune-Baker, 1904

Squamosa Bethune-Baker, 1904, *Novit. Zool.*, 15: 183.

Type species: *Squamosa ferruginea* Bethune-Baker, 1904

♂ Antenna bipectinated to middle, then serrate. Labial palpus projecting quite beyond frontal tuft. Forewing R_{3-5} stalked, R_2 separate.

This genus is characterized by forewing with a lustrous rounded patch on outside of cell and the uncus forked, as well as the juxta with a pair of asymmetric processes.

Distribution. China, India, Nepal, Myanmar, Thailand, New Guinea.

Key to the species and subspecies in China

1. Forewing with discal spot indistinct; uncus long *S. dhalates*
Forewing with discal spot obvious; uncus short 2
2. Process of juxta long *S. brevisunna* **sp. nov.**
Process of juxta short *S. brevisunna yunnanensis* **ssp. nov.**

Squamosa dhalates Orhant, 2000 New record to China (Figs. 1, 3)

Squamosa dhalates Orhant, 2000. *Lambillionea*, 3: 471.

Specimens examined. Yunnan, Yangbi County 1500 m, 1 ♂, 31 July 1980, gen. slide no. L06092; Weixi Town 2320 m, 1 ♂, 12 June 1979, gen. slide no. L06094; Menghai County 1200 m, 1 ♂, 16 Aug. 1982, LUO Heng Wen, gen. slide no. L06088; Lincang 1400 m, 1 ♂, 25 May 1980, YIN Yao-Xuan; Changning County 1680 m, 1 ♂, 11 July 1979. Sichuan, Mt. Emei 1000 m, 1 ♂, Aug. 1976, ZHENG Fa-Ke, gen. slide no. L06089. Chongqi, Wulong County, Chepandong 1000 m, 1 ♂, 2 July 1989, LI Wei, gen. slide no. L06098. Hubei, Xuan'en County, Fenshuiling 1200 m, 1 ♂, 25 May 1989, LI Wei, gen. slide no. L06099. Xizang, Medog, 1 ♂, 22 Aug. 2006, CHEN Fu-Qiang, gen. slide no. L06333.

Distribution. Hubei, Chongqing, Sichuan, Yunnan, Xizang; Thailand, Myanmar.

Remarks. This species is smaller in size among the known Chinese species.

Squamosa brevisunna **sp. nov.** (Figs. 2a, 4)

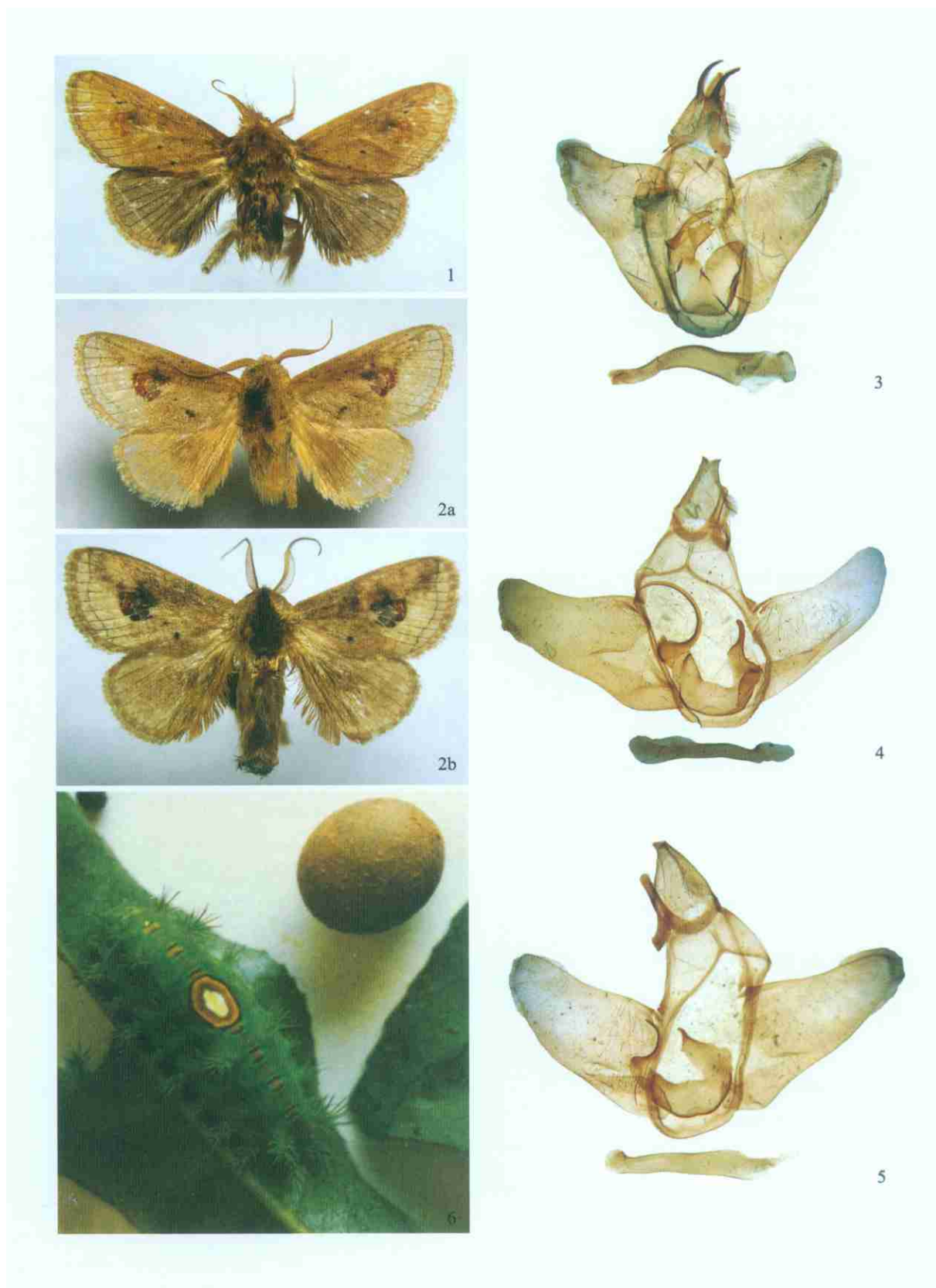
Squamosa ocellata (not Moore) Cai, 1981: 99, fig. 648.

Wing expanse 36–42 mm. Body pale yellowish brown. Thorax and anterior 2 segments of abdomen with a longitudinal row of hair tufts. Anal hair tuft black. Forewing pale yellowish brown mixed with fine black dots, lighter towards outer margin; on outside of cell, a lustrous rounded patch bluish black inside and reddish brown outside, crossed by a light transverse line; a bigger black dot at middle of 1A; subterminal fascia fine, black, bearing a dent at R_4 towards base. Hindwing yellowish brown to dark brown.

Male genitalia (Fig. 4). Uncus apically with a pair of short forks; gnathos thick, apex blunt; valva relatively narrow and long, tapering to a rounded apex; juxta large, one of processes plate shaped, apex hooked, another one narrow and long, apex pointed; aedeagus thin and long, straight, with a small spine at end.

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Figs 1-6. *Squamosa* spp. 1-2. Adults. 1. *S. chalytes* Orhant, ♂, Menghai, Yunnan. 2. *S. brevisinca* sp. nov. (a. ssp. *brevisinca*, ♂, holotype, Ledong, Hainan. b. ssp. *yunnanensis* ♂, paratype, Menghai, Yunnan). 3-5. Male genitalia. 3. *S. chalytes* Orhant, Weixi, Yunnan, gen. slide no. L06094. 4. *S. brevisinca* sp. nov., paratype, Mt. Diaoluo, Hainan, gen. slide no. L06090. 5. *S. brevisinca yunnanensis* ssp. nov., paratype, Longling, Yunnan, gen. slide no. L06087. 6. Larva and cocoon of *S. brevisinca yunnanensis* ssp. nov. (taken by Mr. Cai Rongquan).

Holotype ♂, Hainan, Ledong County, Mt. Jianfengling 900 m, 12 Apr. 1980, CAI Rong-Quan, gen. slide no. L060100. Paratypes: 2 ♂♂, Hainan, Mt. Dianluo, 8 May 1984, GU Mao-Bin, gen. slide no. L06090. 2 ♂♂, Guangxi, Mt. Miaocer 1150 m, 6-13 July 1985, FANG Cheng-Lai, gen. slide no. L06101; 1 ♂, Jinxiu County, Road Jinzhong 1100 m, 12 May 1999, HUANG Fu-Sheng, gen. slide no. L06091.

Distribution. Guangxi, Hainan.

Diagnosis. This new species is related to *S. chalcites* Orhant and *S. ocellata* Moore, but differs from them by the short forks of the uncus in the male genitalia.

Etymology. The name is derived from the Latin “*brevis*” (= short) and “*maus*”, corresponding to the short uncus in the male genitalia.

Squamosa brevisunca yunnanensis **sp. nov.** (Figs. 2b, 5)

Adult. No difference with the nominal subspecies.

Male genitalia (Fig. 5). Process of juxta much shorter than that in the nominal subspecies.

Mature larva. Body length 25-30 mm, oblong, greenish yellow; with four rows of scoli: first three pairs longer for two dorsal rows, roughly equal for two lateral rows; abdomen dorsum with markings composed of whitish green lines, middle with an oblong yellowish white patch, whose both sides lined with dark blue crescent.

Cocoon. Oblong, gray; a lot of brown silk lines cling to the surface, made the cocoon in soil.

Habit. There is one generation per year in Xishuangbana Prefecture, Yunnan Province. It overwinters as the mature larva in the cocoon. The larva feeds during late June to Oct.

Food plants. *Camellia*, *Vernicia*.

Holotype ♂, Menghai County, 1200 m, 13 June

1982, LUO Heng Wen, gen. slide no. L06097. Paratypes: 2 ♂♂, same data as holotype; 1 ♂, Menghai County, 18 July 1958, WANG Shu-Yong; 1 ♂, Longling County, 1600 m, 19-20 May 1955, YANG Xing-Chi, gen. slide no. L06087; 1 ♂, Longling, Longkou, 1400 m, 13 June 1979, gen. slide no. L06096; 1 ♂, Luxi County 1400 m, 7 June 1983, DU Zhao-Yu, gen. slide no. L06095; 1 ♂, Jingdong County, Dongjiafen, 1250 m, 22 May 1956, ZAGULYAEV, gen. slide no. L06093; 1 ♂, Funing County, Jinba 1830 m, 10 May 1979, WEI Yong-Xiong.

Larval Materials. 6 mature larvae reared by Mr. LUO Heng Wen, 21 Sept. 1983, Menghai, Yunnan.

Distribution. Yunnan.

Diagnosis. This new subspecies differs from the nominal subspecies by the much shorter process of the juxta in the male genitalia.

Etymology. The subspecies name is named after the typical locality.

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REFERENCES

- Cai, R. Q. 1981. Limacodidae. In: Iconographia Heterocerorum Sinicorum. 1: 97-104. Science Press, Beijing.
Hering, M. 1931. Limacodidae (Cochliopodidae). In: Seitz, Macrolepid. World. 10: 667-782.
Orhant, G. E. R. J. 2000. New species of Limacodidae from Myanmar and Thailand (Lepidoptera, Limacodidae). *Lambillinea*, 100 (3) (Tome 2): 471-474.

中国鳞刺蛾属订正 (鳞翅目, 刺蛾科)

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摘要 经过系统研究, 发现我国的鳞刺蛾并不是一直被称为的眼鳞刺蛾 *Squamosa ocellata* (Moore), 共有 2 种和 1 亚种。首次报道了姹鳞刺蛾 *S. chalcites* Orhant 在我国有分布, 描述了 1 新种, 短爪鳞刺蛾 *S. brevisunca* 和 1 新亚种, 云南亚种 *S. brevisunca yunnanensis*。本文还描述了云南亚种的茧和老熟幼虫形态, 编制了分种和亚种检索表, 提供了成虫彩色照片和外生殖器特征图。模式标本保存在中国科学院动物研究所国家动物博物馆。

短爪鳞刺蛾, 新种 *Squamosa brevisunca* **sp. nov.** (图 2a, 4)

正模 ♂, 海南尖峰岭天池, 900 m, 1980 04 12, 蔡荣权

采 (L06100)。副模: 2 ♂♂, 吊罗山, 1984 05 08, 顾茂彬采 (L06090)。2 ♂♂, 广西苗儿山九牛场, 1150 m, 1985 07 06-13, 方承莱采 (L06101); 1 ♂, 金秀金忠公路, 1100 m, 1999 05 12, 黄复生采 (L06091)。

分布: 广西、海南。

新种与姹鳞刺蛾 *S. chalcites* Orhant 和眼鳞刺蛾 *S. ocellata* Moore 相似, 但前翅中室端斑较明显, 雄性外生殖器的爪形突明显短于其他两种。

短爪鳞刺蛾云南亚种, 新亚种 *Squamosa brevisunca yunnanensis* **ssp. nov.** (图 2b, 5)

正模 ♂, 西双版纳勐海, 1 200 m, 1982-06-01~ 03, 罗亨文采 (L06097)。副模: 2 ♂♂, 信息同正模; 1 ♂, 地点同正模, 1958-07-18, 王书永采; 1 ♂, 云南龙陵, 1 600 m, 1955-05-19~ 20, 杨星池采 (L06087); 1 ♂, 龙陵龙口, 1 400 m, 1979-06-13, 龙口组采 (L06096); 1 ♂, 潞西, 1 400 m, 1983-06-07, 杜肇怡采 (L06095); 1 ♂, 景东董家坟, 1 250 m, 1956-05-22, 扎古良也夫采 (L06093); 1 ♂, 富宁金坝,

关键词 鳞翅目, 刺蛾科, 鳞刺蛾属, 新种, 中国。
中图分类号 Q969. 431. 2

1 830 m, 1979-05-10, 韦永雄。
幼期材料: 6 头老熟幼虫标本由云南茶叶所的罗亨文先生从茶叶树饲养而得, 浸泡时间 1983-09-21, 编号 13-16。
寄主植物: 茶、油桐。
分布: 云南。
本亚种外形上与指名亚种没有明显区别, 但雄性外生殖器阳茎端基环的左侧突起明显短于指名亚种。